LAND APPLICATION OF BIOSOLIDS GLENBURNIE FARM, LLC

SP 18 (FIELDS 1-33) SPOTSYLVANIA COUNTY, VIRGINIA NOVEMBER 2015





December 10, 2015

Mr. Edward Stuart Department of Environmental Quality Northern Virginia Regional Office 13901 Crown Court Woodbridge, VA 22193

Dear Mr. Stuart:

Transmitted herein for your consideration is land application site for Glenburnie Farm, LLC (designated as SP 18, fields 1-33), located in Spotsylvania County, Virginia. This submission contains strictly site specific information. Please refer to the operations and maintenance manual submitted under separate cover for all non-site specific information.

Do not hesitate to contact me at (804) 443-2170 should you have any questions or require additional information.

Sincerely,
Chuchiteside

Carolanne M. Whiteside

Technical Services Coordinator



FIELD SUMMARY SHEET

Glenburnie Farm, LLC SP 18

SYNACRO	eross	73	ESA		
= = = D	ACRES		TRACT	TYPE	OWNER
#			#		
18-01	97.4	97.4		Agriculture	Biscoe Family LLC
18-02	46.6	46.6		Agriculture	Biscoe Family LLC
18-03	8.1	8.1		Agriculture	Biscoe Family LLC
18-04	94.4	94.4		Agriculture	Biscoe Family LLC
18-05	33.7	33.7		Agriculture	Biscoe Family LLC
18-06	19.1	19.1		Agriculture	Biscoe Family LLC
18-07	20.7	20.7		Agriculture	Biscoe Family LLC
18-08	21.3	21.3		Agriculture	Biscoe Family LLC
18-09	10.5	10.5		Agriculture	Biscoe Family LLC
18-10	13.7	13.7		Agriculture	Biscoe Family LLC
18-11	3.9	3.9		Agriculture	Biscoe Family LLC
18-12	22.3	22.3		Agriculture	Biscoe Family LLC
18-13	26.0	26.0		Agriculture	Biscoe Family LLC
18-14	12.6	12.6		Agriculture	Biscoe Family LLC
18-15	2.0	2.0		Agriculture	Biscoe Family LLC
18-16	4.7	4.7		Agriculture	Biscoe Family LLC
18-17	19.3	19.3		Agriculture	Biscoe Family LLC
18-18	32.3	32.3		Agriculture	Biscoe Family LLC
	52.5	52.5		Agriculture	Willie B. Biscoe Living Trust
18-19	22.6	22.6		Agriculture	George W. Biscoe, Trust
				7 ignounaic	Nancy T. Biscoe, Trust
18-20	18.0	18.0		Agriculture	George W. Biscoe, Trust
	10.0	10.0		7 ignountare	Nancy T. Biscoe, Trust
18-21	30.5	30.5		Agriculture	George W. Biscoe, Trust
	00.0	00.0		7 ignountale	Nancy T. Biscoe, Trust
18-22	26.5	26.5		Agriculture	George W. Biscoe, Trust
					Nancy T. Biscoe, Trust
18-23	19.2	19.2		Agriculture	George W Biscoe or Nancy T Biscoe

TOTALS:	808.9	808.9		
	22.0	22.5	Agriculture	Nancy T. Biscoe, Trust
18-33	22.5	22.5	Agriculture	George W. Biscoe, Trust
	0.9	0.8	Agriculture	Nancy T. Biscoe, Trust
18-32	6.9	6.9	Agriculture	George W. Biscoe, Trust
18-31	12.5	12.5	Agriculture	William W. Biscoe
18-30	19.2	19.2	Agriculture	Nancy T. Biscoe
18-29	19.7	19.7	Agriculture	Nancy T. Biscoe
18-28	23.0	23.0	Agriculture	Nancy T. Biscoe
	20.5	20.5	Agriculture	Nancy T. Biscoe
18-27	26.5	26.5	Agriculture	William W. Biscoe
	12.0	12.0	Agriculture	Nancy T. Biscoe
18-26	12.8	12.8	Agriculture	William W. Biscoe
	30.9	30.9	Agriculture	Nancy T. Biscoe
18-25	36.9	36.9	Agriculture	William W. Biscoe
	20.0	20.0	Agriculture	Nancy T. Biscoe, Trust
18-24	23.5	23.5	Agriculture	George W. Biscoe, Trust

SYNAGR@

VIRGINIA REQUEST AND CONSENT FOR BIOSOLIDS FARM OPERATOR: Glephornie FARM LLC PHONE: (540) 854 499 20 Belmont Rd Spotsylvania VA FARM LOCATION: __ FSA TRACT #: COUNTY: Spotsy vania & Orange TOTAL ACRES: CROPS: COCH Soy beans

- 1. I agree to be responsible for adhering to the following conditions, where applicable:
 - a. The soil pH will be adjusted ≥6.0 when biosolids are applied. (This may be accomplished through the application of lime-treated biosolids).
 - b. Do not graze animals on the land for 30 days after the application of biosolids. In addition, animals intended for dairy production should not be allowed to graze on the land or be fed chopped foliage for 60 days after the application of biosolids. Meat-producing livestock should not be fed chopped foliage for 30 days after the application of biosolids.
 - Food crops for direct human consumption with harvested parts below the surface of the land shall not be harvested for 14 months after the application of biosolids.
 - Food crops for direct human consumption with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface ≥ 4 months prior to incorporation into the soil or 38 months when the biosolids remain on the land surface < 4 months prior to incorporation.
 - Food crops, feed crops and fiber crops shall not be harvested for 30 days after application of biosolids.
 - Public access to land with a low potential for public exposure (land the public uses infrequently including but not limited to agricultural land and forests) shall be restricted for 30 days after application of biosolids. Public access to land with a high potential for public exposure (land the public uses frequently including but not limited to a public contact site such as parks, playgrounds and golf courses) shall be restricted for 1 year. No biosolidsamended soil shall be excavated or removed from the site for 30 days following the biosolids application unless adequate provisions are made to prevent public exposure to soils, dusts or aerosols.
 - Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.
 - Supplemental commercial fertilizer or manure applications should be coordinated with the biosolids applications such that the total crop needs fro nutrients are not exceeded as identified on the nutrient balance sheet or the nutrient management plan approved by the Virginia Department of Conservation and Recreation to be supplied to the farm operator by Synagro at the time of application of biosolids to a specific permitted site.
 - Tobacco, because it has been shown to accumulate cadmium, should not be grown for three years following the application of biosolids-borne cadmium equal to or exceeding 0.45 lbs/acre.
- 2. I understand that this transaction is not contemplated by the parties to be a sale of goods, and that Synagro is willing to provide to me without charge the service of land applying biosolids which have been approved by the appropriate regulatory agencies for land application.
- 3. I understand that successful crop production depends on many variables, such as weather, soil conditions and specific farming practices and that while Synagro has experience with land application of biosolids, the responsibility for properly accommodating agricultural practices to biosolids utilization are solely mine. I have also read and understand the "Important Information About Using Biosolids as a Fertilizer" which is on the reverse side and incorporated by reference in this Request and Consent.

Synagro * 10647 Tidewater Trail * Champlain, VA 22438 * 804.443.2170

IMPORTANT INFORMATION ABOUT USING BIOSOLIDS AS A FERTILIZER

Biosolids Generation

Biosolids are the accumulated, treated solids separated from water during the treatment of wastewater by public and private wastewater treatment plants (Generators). The Generator is responsible for supplying biosolids that are suitable for land application under state and federal regulations.

Benefits of Biosolids

Biosolids provide nitrogen in a form that can be taken up by plants during their growth cycle. Biosolids also add phosphorus to the soil. If lime is added to biosolids, the biosolids will have the added benefit of a liming agent. Biosolids contain primary, secondary and micronutrients that can be used by plants. Biosolids are primarily an organic material; when added to soil, they improve water and nutrient retention, reduce erosion potential and improve soil structure.

The Permitting Process

Once the farm operator requests biosolids, a Synagro representative initially evaluates the farm for truck access and field conditions. If the farm is found to be suitable and the Request for Biosolids and the Consent for Biosolids forms are signed, Synagro will collect soil samples and have them analyzed by an independent laboratory.

Synagro will then apply for any federal, state or local permits required for biosolids application. The permits will specifically identify the fields to which biosolids will be applied and will be issued to Synagro or the Generator.

After the permits are obtained (a process that may take several months or more) Synagro will apply biosolids, as they become available, to the fields. Availability of biosolids may vary because of weather conditions, contractual arrangements with biosolids generators and other factors. Although the company cannot guarantee biosolids application because of factors beyond its control, Synagro will use its best efforts to apply biosolids to the permitted fields.

The conditions outlined in the permit will apply to any and all biosolids applications made by Synagro. Synagro will not e responsible for biosolids application made by any other entity.

Periodic visits to the land application site(s) by federal, state and local regulatory staff and Synagro representatives may occur for the purpose of permitting the site, inspecting the site, applying biosolids, obtaining samples at the site and testing. Proper identification will be provided upon request.

Agronomic Considerations

Tractor-trailer units are used to deliver biosolids to the fields approved for biosolids applications. Soil compaction may occur on the travel areas used by the trucks and in areas where biosolids are unloaded for transfer to the applicator vehicle.

Since some biosolids contain lime, it is important to recognize any increase in soil pH where biosolids have been applied and exercise care in using certain herbicides. If considering the use of a sulfonylurea herbicide, particular attention should be paid to any label restrictions. High soil pH and dry weather may slow decomposition of these chemicals, resulting in carryover. For soils with low manganese levels, increased soil pH from lime addition (alone or in lime treated biosolids) may reduce manganese availability and thereby potentially reduce crop yields.

In planning a herbicide program, it should be noted that seeds may sometimes survive the biosolids treatment process — for example, tomato seeds. Also, the organic matter additions from biosolids application (organic matter tends to tie up certain herbicides) may require increased herbicide application rates. Consult your extension agent or chemical representative for a specific recommendation.

Biosolids contain salts. Biosolids applications alone rarely cause salt problems. However, if combined with other significant salt-increasing factors, such as drought, excessive soil compaction, saline irrigation water and salt-contain fertilizers, salts may reach levels that could negatively affect germination and growth of some crops.

While odors from biosolids applications are not usually significant, and typically less than that from livestock manure, it is possible that an odor from the decomposition of organic matter may be noticed. It this occurs, it generally disappears in a short time.

Since biosolids provide nitrogen that will be released slowly throughout the growing season with diminishing carryover in subsequent years, it is important to reduce the use of nitrogen and other fertilizers to appropriate levels.

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS						
A. This land application agreement is made on 10-25-15 between Nancy 7 Biscoe 7r referred to here as andowner", and Synagro, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.						
Landowner: The Landowner is the owner the agricultural, silvicultural attached as Exhibit A.	er of record of the real property or reclamation sites identified	/ located in Spetsylvania below in Table 1 and identi	م.رة Virginia, which includes fied on the tax map(s)			
Table 1.: Parcels aut	norized to receive biosolids, w	ater treatment residuals or o	other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID			
55-4-A1						
41 - A-15A 55-4-A						
	d Application Sites are identified on S					
	e Landowner is the sole owner e Landowner is one of multiple					
In the event that the Landowner sells or transfers all or part of the property to which biosolids have been applied within 38 months of the latest date of biosolids application, the Landowner shall: 1. Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and 2. Notify the Permittee of the sale within two weeks following property transfer.						
The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect.						
The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application. Class B biosolids Water treatment residuals Yes No Wes No Wes To No Xes No No Wes To No Wes To No No Wes To No No Wes To No No No Wes To No Wes To No No No Wes To No						
George William Biscoe	To Severy Wallet Be	8220) Belmont Rd			
XYes No XYes No George William Biscoe, Tr Society William Biscoe, Tr Society William Biscoe, Tr Society William Biscoe Tr Society William Biscoe Tr Spotsylvania VA 22551 Landowner - Printed Name, Title Signature Mailing Address.						
Permittee: Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.						
	the Landowner or the Landowner ar application to the Landowner's		hedule for land application and source of residuals to be applied.			
X I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)						

Rev 9/14/2012

Permittee - Authorized Representative

Printed Name

Please sign both pages

Page 1 of 2

10647 Tidewater Trail Champlain, VA 22438 Mailing Address

Permittee: Synagro	County or City: 500+34 Varia
Landowner: George William Biscoe Tr	V
Nancy T Biscoe Tr	_

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.

2. Public Access

- a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
- b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
- c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.

3. Crop Restrictions:

- a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
- b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
- c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
- d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
- e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).

4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

- a. Meat producing livestock shall not be grazed for 30 days,
- b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
- c. Other animals shall be restricted from grazing for 30 days;
- 5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
- 6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

 Section 1.5

 **Lease University Process of the pr

Landowner's Signature

ana T. Bescoe Tr.

Doto

Page 2 of 2

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS

andowner", and Synagro cerminated in writing by eith event of a sale of one or midentified in this agreement to receive biosolids or inductor to receive biosolids or	changes, those parcels for v strial residuals under this agr	mittee". This agreement resources parcels that are retained and parcels changes. If or which ownership has changed and the compared and in Spensylves discources and ideas and ideas and ideas and ideas are retained as a supplement.	ed by the Landowner in the wnership of individual parcels ged will no longer be authorize والمدادة وا	d	
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID		
55-A-45 55-A-7					
Additional parcels containing Lan	Application Sites are identified on	Supplement A (shock if applicable			
	e Landowner is the sole own				
	e Landowner is the sole own e Landowner is one of multip				
within 38 months of the later 1. Notify the purchase later than the date 2. Notify the Permittee The Landowner has no other notify the Permittee immedifor application or any part of incorrect.	est date of biosolids application or transferee of the application of the property transfer; and se of the sale within two weeks agreements for land applicately if conditions change suffithis agreement becomes in	on, the Landowner shall: ble public access and crops following property transferation on the fields identified that the fields are no low valid or the information here.	d herein. The Landowner will nger available to the Permittee rein contained becomes	ı.	
agricultural sites identified a inspections on the land ider purpose of determining com	ntified above, before, during on pliance with regulatory requi	andowner also grants per or after land application of rements applicable to suc	mission for DEQ staff to condupermitted residuals for the application.	ıct	
Class B biosolids Wate X Yes □ No X Ye.		ood processing waste Yes □ No	Other industrial sludges X Yes □ No		
Landowner - Printed Name. Title	Willin V. R.		1201 Belmant RJ Społsylvania VH Zz Halling Address	<u>5</u> 57	
Permittee: Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia. The Permittee agrees to notify the Landowner or the Landowner's designee of the proposed schedule for land application and specifically prior to any particular application to the Landowner's land. Notice shall include the source of residuals to be applied.					
X I reviewed the document(s) a		ne person signing for landow	ner above. I will make a copy of t		
TCH Nouthit Permittee - Authorized Represen	tative Signature	An Cha	647 Tidewater Trail amplain, VA 22438 ailing Address		

Rev 9/14/2012

Printed Name

Please sign both pages

Page 1 of 2

Permittee: Synagro	County or City:_	Spotsy	Varia	
'andowner: William W Biscoe		f.		

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.

2. Public Access

- a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
- b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
- c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.

3. Crop Restrictions:

- a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
- b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
- c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
- d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
- e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).

Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

- a. Meat producing livestock shall not be grazed for 30 days,
- b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
- c. Other animals shall be restricted from grazing for 30 days;
- Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial
 residuals applications such that the total crop needs for nutrients are not exceeded as identified in the
 nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of
 Virginia;
- 6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Landowner's Signature

Data

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APPLICATION AGREEMENT - BIOSOLIDS AND INDUSTRIAL RESIDUALS							
A. This land application agreement is made on 10-26-15 between Biscee Family Uteferred to here as andowner", and Synagro, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.							
Landowner: The Landowner is the owner the agricultural, silvicultural attached as Exhibit A.	er of record of the real propert or reclamation sites identified	y located in Spotsylvan I below in Table 1 and iden	Virginia, which includes tiffed on the tax map(s)				
Table 1.: Parcels aut	horized to receive biosolids, w	vater treatment residuals o	r other industrial sludges				
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	Tax Parcel ID				
411- A-13							
41- A-14							
41-4-15							
Additional parcels containing Lan	d Application Sites are identified on S	Supplement A (check if applicable)				
	e Landowner is the sole owne e Landowner is one of multiple						
 within 38 months of the latest date of biosolids application, the Landowner shall: Notify the purchaser or transferee of the applicable public access and crop management restrictions no later than the date of the property transfer; and Notify the Permittee of the sale within two weeks following property transfer. The Landowner has no other agreements for land application on the fields identified herein. The Landowner will notify the Permittee immediately if conditions change such that the fields are no longer available to the Permittee for application or any part of this agreement becomes invalid or the information herein contained becomes incorrect. 							
agricultural sites identified a inspections on the land ider purpose of determining com Class B biosolids Wate X Yes D No X Yes Biscoe Famly LCC Willia B. Brisse	ntified above, before, during on appliance with regulatory required retreatment residuals Form XY S □ No XY Wille Bis	andowner also grants perm r after land application of p ements applicable to such od processing waste 'es □ No X coe Registent S	nission for DEQ staff to conduct ermitted residuals for the application. Other industrial sludges Yes □ No 20 Belmont RJ Potsyl vana VA 22551				
Landowner – Printed Name, Title	Signature	Ma	iling Address .				
Permittee: Synagro, the Permittee, agrees to apply biosolids and/or industrial residuals on the Landowner's land in the manner authorized by the VPA Permit Regulation and in amounts not to exceed the rates identified in the nutrient management plan prepared for each land application field by a person certified in accordance with §10.1-104.2 of the Code of Virginia.							
	the Landowner or the Landowner ar application to the Landowner's		schedule for land application and e source of residuals to be applied.				
X I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)							
Jeff Douthit	If Orne	A B (1 -	47 Tidewater Trail mplain, VA 22438				
Permittee – Authorized Represent Printed Name	ative Signature	Mai	iling Address				

Rev 9/14/2012

Please sign both pages

Page 1 of 2

Permittee: Synagro	_County or City:_	Spotsy	Varia	
'andowner: Biscoe Family LLC	-	V Į.		

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.

2. Public Access

- a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
- b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
- c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.

3. Crop Restrictions:

- a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
- b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
- c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
- d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
- e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).

4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

- a. Meat producing livestock shall not be grazed for 30 days,
- b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
- c. Other animals shall be restricted from grazing for 30 days;
- 5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
- 6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Biscoe Jamely ILC Willis B. Biscoe Pres. 10-26-13

Landowner's Signature Date

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APP	LICATION AGREEMEN		IDUSTRIAL RESIDUALS
event of a sale of one or me	er party or, with respect to ore parcels, until ownership changes, those parcels for	ermittee". This agreement those parcels that are reta of all parcels changes. If which ownership has cha	an 13 Buscoe referred to here as remains in effect until it is ined by the Landowner in the ownership of individual parcels aged will no longer be authorized
Landowner: The Landowner is the owner the agricultural, silvicultural attached as Exhibit A.	er of record of the real prop or reclamation sites identif	erty located in <u>Spotsylv</u> ied below in Table 1 and id	enia.C ₉ Virginia, which includes lentified on the tax map(s)
Table 1.: Parcels aut	horized to receive biosolids	, water treatment residuals	s or other industrial sludges
Tax Parcel ID	Tax Parcel ID	<u>Tax Parcel ID</u>	Tax Parcel ID
41-A-39A			
,			
•	014		
Additional parcels containing Lan	d Application Sites are identified o	n Supplement A (check if applica	ble)
	e Landowner is the sole ow e Landowner is one of mult		
within 38 months of the late 1. Notify the purchase later than the date of 2. Notify the Permittee The Landowner has no other	st date of biosolids applica r or transferee of the applic of the property transfer; and a of the sale within two wee or agreements for land appl ately if conditions change s	tion, the Landowner shall: cable public access and cro f ks following property trans ication on the fields identif uch that the fields are no l	ied herein. The Landowner will onger available to the Permittee
inspections on the land iden purpose of determining com	bove and in Exhibit A. The tified above, before, during pliance with regulatory requestreatment residuals E. □ No	ELandowner also grants por or after land application of uirements applicable to substantial processing waste (Yes 🗆 No	ermission for DEQ staff to conduct f permitted residuals for the
	o.g.nata.o	196	Walling / tautoss .
	and in amounts not to exceed	the rates identified in the nutr	vner's land in the manner authorized ient management plan prepared for e of Virginia.
The Permittee agrees to notify t specifically prior to any particula	he Landowner or the Landown or application to the Landowne	ner's designee of the proposer's land. Notice shall include	ed schedule for land application and the source of residuals to be applied.
X I reviewed the document(s) a document(s) available to DEQ f	ssigning signatory authority to or review upon request. (Do n	the person signing for landowners the check this box if the landowners	vner above. I will make a copy of this raigns this agreement)
Jeff Douthit	left Och	8 B 11 Z	0647 Tidewater Trail Lamplain, VA 22438
Permíttee – Authorized Represent Printed Name	ative Signature		Mailing Address

Rev 9/14/2012

Please sign both pages

Page 1 of 2

Permittee: Synagro	County or City:	500454	Varia
andowner: Wille B Bis	oe Living Trust.	t.	

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.

2. Public Access

- a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
- b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
- c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.

3. Crop Restrictions:

- a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
- b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
- c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
- d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids;
- e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).

4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

- a. Meat producing livestock shall not be grazed for 30 days,
- b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
- c. Other animals shall be restricted from grazing for 30 days;
- 5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
- 6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Willie B. Biscre

10-26-15

Date

Landowner's Signature

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION FORM D: MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI: LAND APF	PLICATION AGREEMENT	- BIOSOLIDS AND II	NDUSTRIAL RESIDUALS			
A. This land application agreement is made on 10.25-15 between Navy T 3x64 referred to here as andowner", and Synagro, referred to here as the "Permittee". This agreement remains in effect until it is terminated in writing by either party or, with respect to those parcels that are retained by the Landowner in the event of a sale of one or more parcels, until ownership of all parcels changes. If ownership of individual parcels identified in this agreement changes, those parcels for which ownership has changed will no longer be authorized to receive biosolids or industrial residuals under this agreement.						
Landowner: The Landowner is the own the agricultural, silvicultura attached as Exhibit A.	er of record of the real prope l or reclamation sites identific	rty located in Spetsylved below in Table 1 and i	مره که Virginia, which includes dentified on the tax map(s)			
Table 1.: Parcels au	thorized to receive biosolids,	water treatment residual	ls or other industrial sludges			
Tax Parcel ID	Tax Parcel ID	Tax Parcel ID	<u>Tax Parcel ID</u>			
55-A-8						
			·			
Additional parcels containing Lan	 d Application Sites are identified on	Supplement A (check if applic	ahle)			
	e Landowner is the sole owr		·			
	e Landowner is one of multip					
within 38 months of the late 1. Notify the purchase later than the date	est date of biosolids applicati	on, the Landowner shall: able public access and cr	op management restrictions no			
notify the Permittee immed		ch that the fields are no	fied herein. The Landowner will longer available to the Permittee nerein contained becomes			
The Landowner hereby grants permission to the Permittee to land apply residuals as specified below, on the agricultural sites identified above and in Exhibit A. The Landowner also grants permission for DEQ staff to conduct inspections on the land identified above, before, during or after land application of permitted residuals for the purpose of determining compliance with regulatory requirements applicable to such application. Class B biosolids Water treatment residuals X Yes No No No No No No No No No N						
XYes □ No XYe	./	103	8220 Belmont Rd			
Nancy T Biscoe Landowner - Printed Name, Title) (anex To	Bucco	Spotalluania VA 22551 Mailing Address			
Permittee: Synagro, the Permittee, agrees by the VPA Permit Regulation each land application field by a	s to apply biosolids and/or indus and in amounts not to exceed the person certified in accordance	ne rates identified in the nut with §10.1-104.2 of the Co	owner's land in the manner authorized rient management plan prepared for de of Virginia			
			ed schedule for land application and e the source of residuals to be applied.			
K I reviewed the document(s) assigning signatory authority to the person signing for landowner above. I will make a copy of this document(s) available to DEQ for review upon request. (Do not check this box if the landowner signs this agreement)						

Rev 9/14/2012

Permittee – Authorized Representative Printed Name

Please sign both pages

Page 1 of 2

10647 Tidewater Trail Champlain, VA 22438 Mailing Address

Permittee: Synagro	_County or City:_	Spotsy	Varia
'andowner: Nancy T: Biscoe	_	(

Landowner Site Management Requirements:

I, the Landowner, I have received a DEQ Biosolids Fact Sheet that includes information regarding regulations governing the land application of biosolids, the components of biosolids and proper handling and land application of biosolids.

I have also been expressly advised by the Permittee that the site management requirements and site access restrictions identified below must be complied with after biosolids have been applied on my property in order to protect public health, and that I am responsible for the implementation of these practices.

I agree to implement the following site management practices at each site under my ownership following the land application of biosolids at the site:

1. Notification Signs: I will not remove any signs posted by the Permittee for the purpose of identifying my field as a biosolids land application site, unless requested by the Permittee, until at least 30 days after land application at that site is completed.

2. Public Access

- a. Public access to land with a high potential for public exposure shall be restricted for at least one year following any application of biosolids.
- b. Public access to land with a low potential for public exposure shall be restricted for at least 30 days following any application of biosolids. No biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;
- c. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by DEQ.

Crop Restrictions:

- a. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids.
- b. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil,
- c. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation.
- d. Other food crops and fiber crops shall not be harvested for 30 days after the application of biosolids:
- e. Feed crops shall not be harvested for 30 days after the application of biosolids (60 days if fed to lactating dairy animals).

4. Livestock Access Restrictions:

Following biosolids application to pasture or hayland sites:

- a. Meat producing livestock shall not be grazed for 30 days,
- b. Lactating dairy animals shall not be grazed for a minimum of 60 days.
- c. Other animals shall be restricted from grazing for 30 days:
- 5. Supplemental commercial fertilizer or manure applications will be coordinated with the biosolids and industrial residuals applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia;
- 6. Tobacco, because it has been shown to accumulate cadmium, should not be grown on the Landowner's land for three years following the application of biosolids or industrial residuals which bear cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

Landowner's Signature

Date

Page 2 of 2

TAX ID LANDOWNER IDENTIFICATION SHEET

Landowner	Field Number	Tax ID
Biscoe Family LLC	18-01	41-A-14
Biscoe Family LLC	18-02	41-A-14
Biscoe Family LLC	18-03	41-A-14
Biscoe Family LLC	18-04	41-A-14
Biscoe Family LLC	18-05	41-A-14
Biscoe Family LLC	18-06	41-A-13
Biscoe Family LLC	18-07	41-A-13
Biscoe Family LLC	18-08	41-A-13
Biscoe Family LLC	18-09	41-A-13
Biscoe Family LLC	18-10	41-A-13
Biscoe Family LLC	18-11	41-A-14
Biscoe Family LLC	18-12	41-A-14
Biscoe Family LLC	18-13	41-A-14
Biscoe Family LLC	18-14	41-A-15
Biscoe Family LLC	18-15	41-A-15
Biscoe Family LLC	18-16	41-A-15
Biscoe Family LLC	18-17	41-A-14, 41-A-15
Biscoe Family LLC	18-18	41-A-13
Willie B. Biscoe Living Trust		41-A-39A
George W. Biscoe, Trust	18-19	EE A AA
Nancy T. Biscoe, Trust		55-4-A1
George W. Biscoe, Trust	18-20	55-4-A1
Nancy T. Biscoe, Trust		33-4-71
George W. Biscoe, Trust	18-21	55-4-A1
Nancy T. Biscoe, Trust		00-4-7(1
George W. Biscoe, Trust	18-22	55-4-A1
Nancy T. Biscoe, Trust		33-4-71
George W Biscoe or Nancy T Biscoe	18-23	55-4-A
George W. Biscoe, Trust	18-24	55-4-A1
Nancy T. Biscoe, Trust		33-4-A1
William W. Biscoe	18-25	55-A-5
Nancy T. Biscoe		55-A-8
William W. Biscoe	18-26	55-A-5
Nancy T. Biscoe		55-A-8
William W. Biscoe	18-27	55-A-5
Nancy T. Biscoe		55-A-8
Nancy T. Biscoe	18-28	55-A-8
Nancy T. Biscoe	18-29	55-A-8
Nancy T. Biscoe	18-30	55-A-8
William W. Biscoe	18-31	55-A-7
George W. Biscoe, Trust	18-32	55-4-A1
Nancy T. Biscoe, Trust		00 4-7(1
George W. Biscoe, Trust	18-33	55-4-A1
Nancy T. Biscoe, Trust		00 -7-711

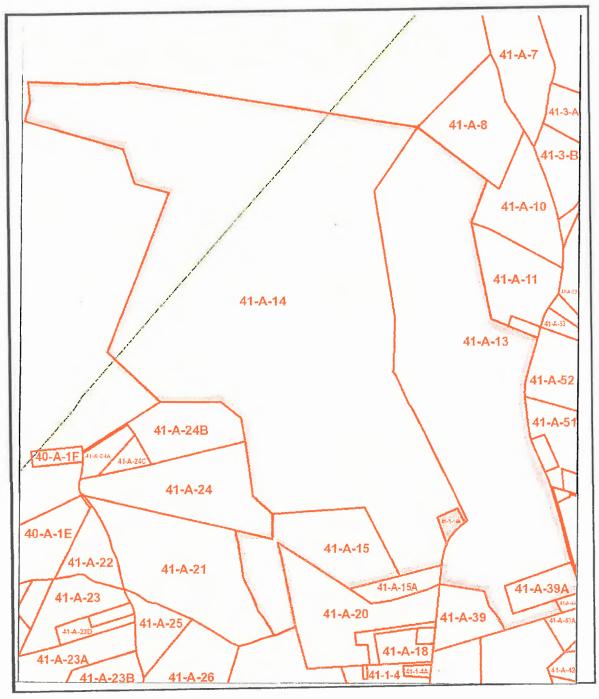
Field Number	Latitude (North)	Longitude (West)
18-01	38.196°	77.871°
18-02	38.192°	77.866°
18-03	38.195°	77.866°
18-04	38.197°	77.867°
18-05	38.196°	77.863°
18-06	38.196°	77.859°
18-07	38.192°	77.856°
18-08	38.192°	77.858°
18-09	38.192°	77.860°
18-10	38.189°	77.856°
18-11	38.190°	77.860°
18-12	38.189°	77.861°
18-13	38.189°	77.866°
18-14	38.186°	77.864°
18-15	38.185°	77.866°
18-16	38.185°	77.867°
18-17	38.186°	77.861°
18-18	38.187°	77.855°
18-19	38.166°	77.867°
18-20	38.162°	77.866°
18-21	38.163°	77.870°
18-22	38.161°	77.866°
18-23	38.156°	77.868°
18-24	38.165°	77.867°
18-25	38.153°	77.863°
18-26	38.153°	77.861°
18-27	38.156°	77.863°
18-28	38.151°	77.865°
18-29	38.150°	77.863°
18-30	38.150°	77.865°
18-31	38.149°	77.867°
18-32	38.160°	77.872°
18-33	38.159°	77.867°

Haul Route:

The Location maps in conjunction with the above latitude and longitude coordinates are a route planning tool meant to be a guide to indicate suggested haul routes for various preferences: to include but not limited to all federal, state, and local granted STAA access routes.



Glenburnie Farm, LLC SP18

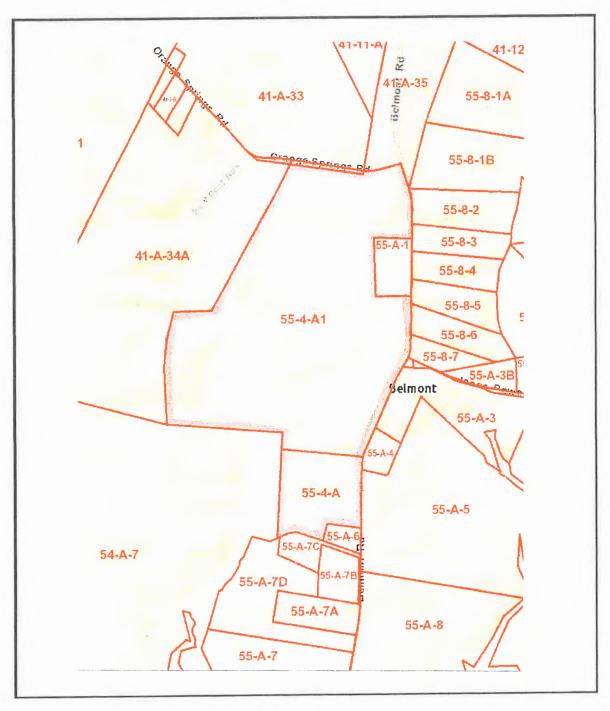


TAX MAP





Glenburnie Farm, LLC SP18

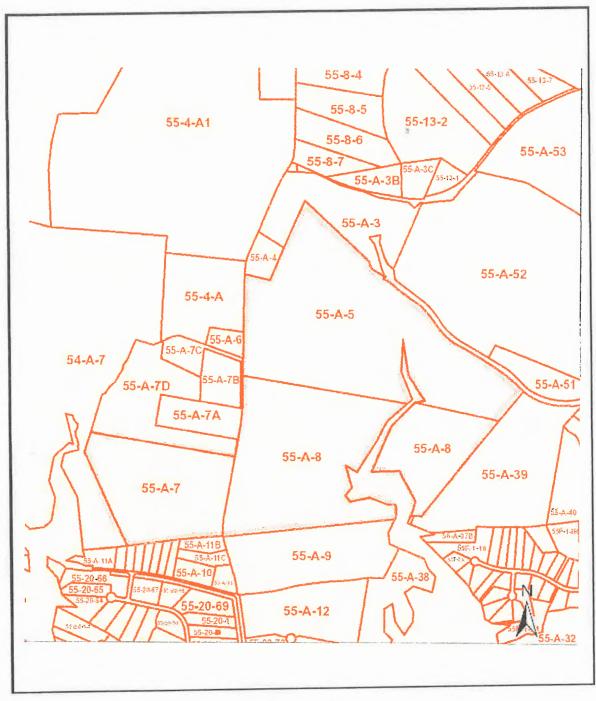


TAX MAP





Glenburnie Farm, LLC SP18



TAX MAP



Farm Summary Report

Plan:

New Plan

Fall, 2015 - Winter, 2016

Farm Name: Location:

Glenburnie Farm

Spotsylvania

Specialist:

Jeffery R Douthit

N-based Acres: 808.9 P-based Acres: 0.0

Tract Name:

SP18

FSA Number: 0

Location:

Spotsylvania

Field Name:

Total Acres: FSA Number: 0

97.40 Usable Acres: 97.40

Tract:

SP18

В

Location:

Spotsylvania

Slope Class:

Hydrologic Group:

В

Riparian buffer width: 0 ft Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE

Ρ

Κ

Lab

[NO TEST]

Soils:

PERCENT

SYMBOL

SOIL SERIES

45 45

39B

Tatum

32B Nason

10

1B Abell

Field Name: 2 Total Acres: 46.60 Usable Acres: 46.60 FSA Number: 0 Tract: **SP18** Spotsylvania Location: Hydrologic Group: Slope Class: С С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Ρ Κ DATE PH Lab Soils: PERCENT SOIL SERIES SYMBOL 6 1B Abell 12 Cartecay 10 22 12B Cecil 51 Cecil Pacolet 13C2 4 27C Louisburg 2 32C2 Nason Field Warnings: Field Name: Total Acres: 8.10 Usable Acres: 8.10 FSA Number: 0 Tract: SP18 Spotsylvania Location: Hydrologic Group: Slope Class: В С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE PH Р Κ Lab Soils: PERCENT SYMBOL SOIL SERIES 20 Abell 1B 27 4C2 Appling Wedowee 5 10 Cartecay 7 Cecil 12B Cecil Pacolet 16 13C2 Fluvaquents Udifluvents 21 23 4 27D Louisburg

Field Name: Total Acres: 94.40 Usable Acres: 94.40 FSA Number: 0 Tract: SP18 Location: Spotsylvania Hydrologic Group: Slope Class: С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Р Κ Lab DATE PH Soils: PERCENT SOIL SERIES SYMBOL 47 32C2 Nason 15 10 Cartecay 5 39B Tatum 5 12B Cecil Cecil Pacolet 15 13C2 Appling Wedowee 5 4C2 5 Fluvaquents Udifluvents 23 3 28B Margo Field Warnings: Field Name: Total Acres: 33.70 Usable Acres: 33.70 FSA Number: 0 Tract: SP18 Spotsylvania Location: Hydrologic Group: С Slope Class: Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE PH Ρ Κ Lab Soils: PERCENT SYMBOL SOIL SERIES 5 1B Abell

Appling Wedowee

Fluvaquents Udifluvents

Cecil Pacolet

Louisburg

Cecil

4C2

12B

23

27D

13C2

2 Field Warnings:

30

25

13

25

Field Name: Total Acres: 19.10 Usable Acres: 19.10 FSA Number: 0 SP18 Tract: Spotsylvania Location: Hydrologic Group: Slope Class: С С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Р Κ PH DATE Lab Soils: PERCENT SYMBOL SOIL SERIES 1B Abell 4 11 Cecil 12B 4C2 Appling Wedowee 63 22 23 Fluvaquents Udifluvents Field Warnings: Field Name: 20.70 Usable Acres: 20.70 Total Acres: FSA Number: SP18 Tract: Location: Spotsylvania Hydrologic Group: С Slope Class: В Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE PH P Κ Lab [NO TEST] Soils: PERCENT SYMBOL SOIL SERIES 1B 17 Abell 12B Cecil 56 7 4C2 Appling Wedowee 20 13C2 Cecil Pacolet

Field Name: 8 Total Acres: 21.30 Usable Acres: 21.30 FSA Number: 0 Tract: SP18 Location: Spotsylvania Hydrologic Group: С Slope Class: С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Κ Lab DATE PΗ Ρ Soils: PERCENT SYMBOL SOIL SERIES Abell 26 1B Cecil Pacolet 13C2 49 24 12B Cecil Appling Wedowee 4C2 1 Field Warnings: Field Name: Total Acres: 10.50 Usable Acres: 10.50 FSA Number: 0 Tract: SP18 Location: Spotsylvania В Hydrologic Group: В Slope Class: Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Κ Р Lab DATE PH [NO TEST] Soils: PERCENT SYMBOL SOIL SERIES Abell 1B 4 72 12B Cecil Cecil Pacolet 20 13C2

Appling Wedowee

4C2

Field Warnings:

4

Field Name: 10 Total Acres: 13.70 Usable Acres: 13.70 FSA Number: 0 SP18 Tract: Location: Spotsylvania Slope Class: С Hydrologic Group: С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Р Κ DATE Lab [NO TEST] Soils: PERCENT SYMBOL SOIL SERIES 4C2 Appling Wedowee 65 21 1B Abell 14 12B Cecil Field Warnings: Field Name: Total Acres: 3.90 Usable Acres: 3.90 FSA Number: 0 **SP18** Tract: Location: Spotsylvania Slope Class: Hydrologic Group: С В Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE PΗ Κ Lab [NO TEST] Soils: PERCENT SYMBOL SOIL SERIES 12B 30 Cecil 30 1B Abell

Field Warnings:

8

32

34B

Partlow

13C2 Cecil Pacolet

```
Field Name:
                    12
Total Acres:
              22.30 Usable Acres: 22.30
FSA Number: 0
              SP18
Tract:
Location:
                      Spotsylvania
Slope Class:
                      Hydrologic Group:
                                            С
              В
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
Soil Test Results:
                      Ρ
                                                   Κ
                                                                                Lab
DATE
       [NO TEST]
Soils:
       PERCENT
                     SYMBOL
                                    SOIL SERIES
                     13C2 Cecil Pacolet
       32
       66
                     12B
                             Cecil
       2
                     34B
                             Partlow
Field Warnings:
Field Name:
                    13
              26.00 Usable Acres: 26.00
Total Acres:
FSA Number: 0
              SP18
Tract:
                     Spotsylvania
Location:
                     Hydrologic Group:
Slope Class:
              С
                                           С
Riparian buffer width: 0 ft
Distance to stream: 0 ft
P-Index Summary
N-based
Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method
Soil Test Results:
                     Ρ
                                                  Κ
                                                                                Lab
DATE
              PH
       [NO TEST]
Soils:
       PERCENT
                     SYMBOL
                                    SOIL SERIES
       9
                     34B
                            Partlow
       12
                     1B
                            Abell
                     10
                            Cartecay
       2
       20
                     4C2
                            Appling Wedowee
                            Cecil
       12
                     12B
                            Cecil Pacolet
       44
                     13C2
       1
                     27C
                            Louisburg
Field Warnings:
```

Field Name: 14 Total Acres: 12.60 Usable Acres: 12.60 FSA Number: 0 Tract: SP18 Spotsylvania Location: Hydrologic Group: Slope Class: В Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Κ Lab DATE Ρ Soils: SOIL SERIES PERCENT SYMBOL Cecil 12B 60 13C2 Cecil Pacolet 25 Abell 5 1B Appling Wedowee 10 4C2 Field Warnings: Field Name: 15 Usable Acres: 2.00 Total Acres: 2.00 FSA Number: 0 Tract: SP18 Spotsylvania Location: С Hydrologic Group: С Slope Class: Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE PH P K Lab

Soils:

PERCENT SYMBOL SOIL SERIES
35 4C2 Appling Wedowee
15 1B Abell
50 27C Louisburg

Field Warnings:

Environmentally Sensitive Soils due to:

Soils with potential for leaching based on soil texture or excessive drainage

Field Name: 16 Total Acres: 4.70 Usable Acres: 4.70 FSA Number: 0 Tract: SP18 Location: Spotsylvania Slope Class: Hydrologic Group: C Α Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Lab DATE Р Κ Soils: PERCENT SOIL SERIES SYMBOL 8 27C Louisburg 92 10 Cartecay Field Warnings: Environmentally Sensitive Soils due to: Soils with potential for leaching based on soil texture or excessive drainage Field Name: 17 Total Acres: 19.30 Usable Acres: 19.30 FSA Number: 0 SP18 Tract: Spotsylvania Location: Hydrologic Group: Slope Class: C В Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE PH Ρ Κ Lab [NO TEST]

Soils:

PERCENT SYMBOL SOIL SERIES 55 12B Cecil

38 13C2 Cecil Pacolet

7 1B Abell

Field Name: 18 Total Acres: 32.30 Usable Acres: 32.30 FSA Number: Tract: SP18 Spotsylvania Location: C Slope Class: В Hydrologic Group: Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Ρ Κ Lab DATE РΗ Soils: **PERCENT** SOIL SERIES SYMBOL 7 1B Abell 35 12B Cecil 20 13C2 Cecil Pacolet Appling Wedowee 9 4C2 2 14B Colfax 15 34B Partlow 5 35C Poindexter 7 Louisburg 27C Field Warnings: Field Name: 19 22.60 Usable Acres: 22.60 Total Acres: FSA Number: **SP18** Tract: Spotsylvania Location: Hydrologic Group: С Slope Class: В Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE PΗ Ρ Κ Lab Soils: **PERCENT** SYMBOL SOIL SERIES 21 4C2 Appling Wedowee 45 12B Cecil 22 13C2 Cecil Pacolet

Abell

1B

Field Warnings:

12

Field Name: 20 Total Acres: 18.00 Usable Acres: 18.00 FSA Number: 0 Tract: SP18 Location: Spotsylvania Slope Class: Hydrologic Group: С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE PH Κ Lab Soils: PERCENT SYMBOL SOIL SERIES 1B Abell 10 12B 50 Cecil 40 13C2 Cecil Pacolet Field Warnings: Field Name: 21 30.50 Usable Acres: 30.50 Total Acres: FSA Number: 0 SP18 Tract: Spotsylvania Location: Hydrologic Group: Slope Class: С С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Ρ Κ Lab DATE Soils: PERCENT SYMBOL SOIL SERIES 6 1B Abell 5 10 Cartecay 45 4C2 Appling Wedowee Cecil 9 12B 20 Cecil Pacolet 13C2 Louisburg 13 27C 2 27D Louisburg

Field Name: 22

Total Acres: 26.50 Usable Acres: 26.50

FSA Number: 0 Tract: SP18

Location: Spotsylvania

Slope Class: C Hydrologic Group: C

Riparian buffer width: 0 ft Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE PH P K Lab

Soils:

SOIL SERIES PERCENT SYMBOL 15 1B Abell 4C2 Appling Wedowee 10 Cecil 30 12B Cecil Pacolet 40 13C2 3 22B Fluvanna 2 22C2 Fluvanna

Field Warnings:

Field Name: 23

Total Acres: 19.20 Usable Acres: 19.20

FSA Number: 0 Tract: SP18

Location: Spotsylvania

Slope Class: C Hydrologic Group: C

Riparian buffer width: 0 ft Distance to stream: 0 ft

P-Index Summary

N-based

Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method

Soil Test Results:

DATE PH P K Łab

Soils:

SYMBOL SOIL SERIES **PERCENT** Abell 20 1B 10 3В **Appling** 4C2 Appling Wedowee 36 Cecil 15 12B Cecil Pacolet 7 13C2 2 27D Louisburg 27C Louisburg 10

Field Name: 24 23.50 Usable Acres: 23.50 Total Acres: FSA Number: 0 Tract: SP18 Spotsylvania Location: Slope Class: Hydrologic Group: С С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Κ DATE Ρ Lab PH Soils: PERCENT SYMBOL **SOIL SERIES** Appling Wedowee 50 4C2 25 1B Abell 15 12B Cecil 13C2 Cecil Pacolet 10 Field Warnings: Field Name: 36.90 Usable Acres: 36.90 Total Acres: FSA Number: 0 SP18 Tract: Spotsylvania Location: С Hydrologic Group: С Slope Class: Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE PH Ρ Κ Lab Soils: PERCENT SYMBOL SOIL SERIES 13C2 Cecil Pacolet 45 30 12B Cecil 20 1B Abell 5 4C2 Appling Wedowee

Field Name: 26 Total Acres: 12.80 Usable Acres: 12.80 FSA Number: 0 SP18 Tract: Location: Spotsylvania Slope Class: Hydrologic Group: С С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE Ρ PH Κ Lab Soils: PERCENT SOIL SERIES SYMBOL Abell 23 1B 10 12B Cecil 13C2 Cecil Pacolet 67 Field Warnings: Field Name: 27 Total Acres: 26.50 Usable Acres: 26.50 FSA Number: 0 SP18 Tract: Location: Spotsylvania Hydrologic Group: Slope Class: В С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE Р Κ Lab Soils: PERCENT SYMBOL SOIL SERIES 20 Abell 1B 20 2B Altavista 8 3B Appling Appling Wedowee 20 4C2

Field Warnings:

5

20

3

2

4D2

22C2

13C2

27E

23

Appling Wedowee

Fluvanna

Louisburg

Cecil Pacolet

Fluvaquents Udifluvents

Field Name: 28 23.00 Usable Acres: 23.00 Total Acres: FSA Number: 0 SP18 Tract: Location: Spotsylvania Hydrologic Group: Slope Class: С C Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Κ DATE Ρ Lab Soils: SYMBOL SOIL SERIES PERCENT 80 4C2 Appling Wedowee 15 13C2 Cecil Pacolet 4 27D Louisburg 1 1B Abell Field Warnings: Field Name: 29 19.70 Usable Acres: 19.70 Total Acres: FSA Number: 0 Tract: SP18 Location: Spotsylvania Slope Class: В Hydrologic Group: C Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Κ Ρ DATE PH Lab [NO TEST] Soils: PERCENT SYMBOL **SOIL SERIES** 25 1B Abell 4C2 Appling Wedowee 8 13C2 Cecil Pacolet 12 6 23 Fluvaquents Udifluvents 12 27D Louisburg 10 29B Masada 27 34B Partlow

Field Name: 30 Total Acres: 19.20 Usable Acres: 19.20 FSA Number: 0 **SP18** Tract: Spotsylvania Location: Slope Class: Hydrologic Group: В С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: DATE Р Κ Lab PН [NO TEST] Soils: PERCENT SYMBOL SOIL SERIES 4C2 Appling Wedowee 40 12B Cecil 40 2 27D Louisburg 18 Abell 1B Field Warnings: Field Name: 31 12.50 Usable Acres: 12.50 Total Acres: FSA Number: 0 Tract: SP18 Location: Spotsylvania Slope Class: Hydrologic Group: В В Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental, Threshold (PET) method Soil Test Results: DATE РΗ Ρ Κ Lab [NO TEST] Soils: SYMBOL SOIL SERIES PERCENT 4 1B Abell 85 Cecil 12B 13C2 Cecil Pacolet 5 6 32C2 Nason

Field Warnings:

Field Name: 32 Total Acres: 6.90 Usable Acres: 6.90 FSA Number: 0 **SP18** Tract: Location: Spotsylvania Hydrologic Group: Slope Class: C Α Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: P Κ DATE Lab Soils: PERCENT SYMBOL SOIL SERIES 100 10 Cartecay Field Warnings: Environmentally Sensitive Soils due to: Soils with potential for leaching based on soil texture or excessive drainage Field Name: 33 Total Acres: 22.50 Usable Acres: 22.50 FSA Number: 0 **SP18** Tract: Location: Spotsylvania Slope Class: С Hydrologic Group: С Riparian buffer width: 0 ft Distance to stream: 0 ft P-Index Summary N-based Phosphorus Limit method: Phosphorus Environmental Threshold (PET) method Soil Test Results: Κ DATE Lab [NO TEST] Soils: PERCENT SYMBOL SOIL SERIES 40 12B Cecil Cecil Pacolet 50 13C2 4 1B Abell 4 22C2 Fluvanna

Field Warnings:

2

13D2 Cecil Pacolet

ENVIRONMENTALLY SENSITIVE AREAS

Field	Reason for Sensitive Area
18-01	None
18-02	High Water Table (Map Unit 10 - 12%) Frequent Flooded Soils (Map Unit 10 - 12%) Leaching (Map Unit 10, 27C - 16%)
18-03	High Water Table (Map Units 10, 23 - 26%) Frequent Flooded Soils (Map Units 10, 23 - 26%) Leaching (Map Units 10, 27D - 9%) Escessive Slope (Map Unit 27D - 4%)
18-04	High Water Table (Map Units 10, 23, 28B - 23%) Frequent Flooded Soils (Map Units 10, 23 - 20%) Leaching (Map Unit 10 - 15%)
18-05	High Water Table (Map Unit 23 - 25%) Frequent Flooded Soils (Map Unit 23 - 25%) Leaching (Map Unit 27D - 2%) Excessive Slope (Map Unit 27D - 2%)
18-06	High Water Table (Map Unit 23 - 22%) Frequent Flooded Soils (Map Unit 23 - 22%)
18-07	None
18-08	None
18-09	None
18-10	None
18-11	High Water Table (Map Unit 34B - 8%) Frequent Flooded Soils (Map Unit 24B - 8%)
18-12	High Water Table (Map Unit 34B - 2%) Frequent Flooded Soils (Map Unit 34 B -2%)
18-13	High Water Table (Map Unit 10 ,34B - 12%) Frequent Flooded Soils (Map Units 10, 34B - 12%) Leaching (Map Units 10, 27C - 3%)
18-14	None
18-15	Leaching (Map Unit 27C - 50%)

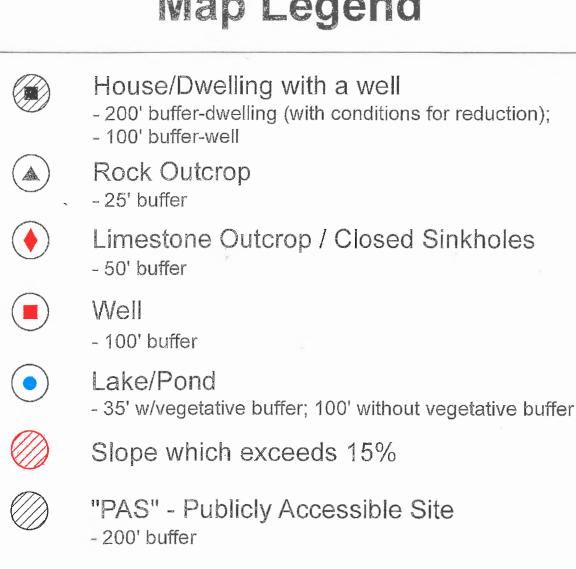
18-16	High Water Table (Map Unit 10 - 92%) Frequent Flooded Soils (Map Unit 10 - 92%) Leaching (Map Units 10, 27C - 100%)
18-17	None
18-18	High Water Table (Map Units 14B, 34B - 17%) Frequent Flooded Soils (Map Units 14B, 34B - 17%) Leaching (Map Unit 27C - 7%)
18-19	None
18-20	None
18-21	High Water Table (Map Unit 10 - 5%) Frequent Flooded Soils (Map Unit 10 - 5%) Leaching (Map Units 10, 27C, 27D - 20%) Excessive Slope (Map Unit 27D - 2%)
18-22	None
18-23	Leaching (Map Unit 27C, 27C - 12%) Excessive Slope (Map Unit 27D - 2%)
18-24	None
18-25	None
18-26	None
18-27	High Water Table (Map Units 2B, 23 - 40%) Frequent Flooded Soils (Map Units 2b, 23 - 40%)
	Leaching (Map Unit 27E - 2%) Excessive Slope (Map Unit 27E - 2%)
18-28	
18-28 18-29	Excessive Slope (Map Unit 27E - 2%) Leaching (Map Unit 27D - 4%)
	Excessive Slope (Map Unit 27E - 2%) Leaching (Map Unit 27D - 4%) Excessive Slope (Map Unit 27D - 4%) High Water Table (Map Units 23, 34B - 31%) Frequent Flooded Soils (Map Units 23, 34B - 31%) Leaching (Map Unit 27D - 12%)

18-32 High Water Table (Map Unit 10 - 100%)
Frequent Flooded Soils (Map Unit 10 - 100%)
Leaching (Map Unit 10 - 100%)
18-33 Excessive Slope (Map Unit 13D2 - 2%)

Spotsylvania County Soils that are Environmentally Sensitive

Soil Map Unit	Series Name	Time of year		
		High Water	Flooded	Environmental
2B	Altavista	Dec – March	April – July	
5, 6, 7B	Aquults	Dec – April		
10	Cartecay	Jan – April	Dec - March	Leaching
14B, 14C	Colfax	Nov – June		
16	Dogue	Jan – March		
17C, 17D, 17E	Dystrochrepts	Nov – April		Leaching
23	Fluvaquents	Nov – Jan	Nov – Jan	
27C, 27D, 27E	Louisburg			Leaching
28B	Margo	Nov – March		
33B, 33C2	Orange	Dec – May		
34B	Partlow	Nov – May	Jan - Dec	
36A, 36B	Savannah	Dec – May		
40	Tetotum	Dec - March		
42B	Toddstav	Nov – May		
47E	Watt			Shallow

Map Legend



Intermittent Stream

- 35' w/vegetative buffer; 100' without vegetative buffer

Stream/River

- 35' w/vegetative buffer; 100' without vegetative buffer

Agricultural/Drainage Ditch

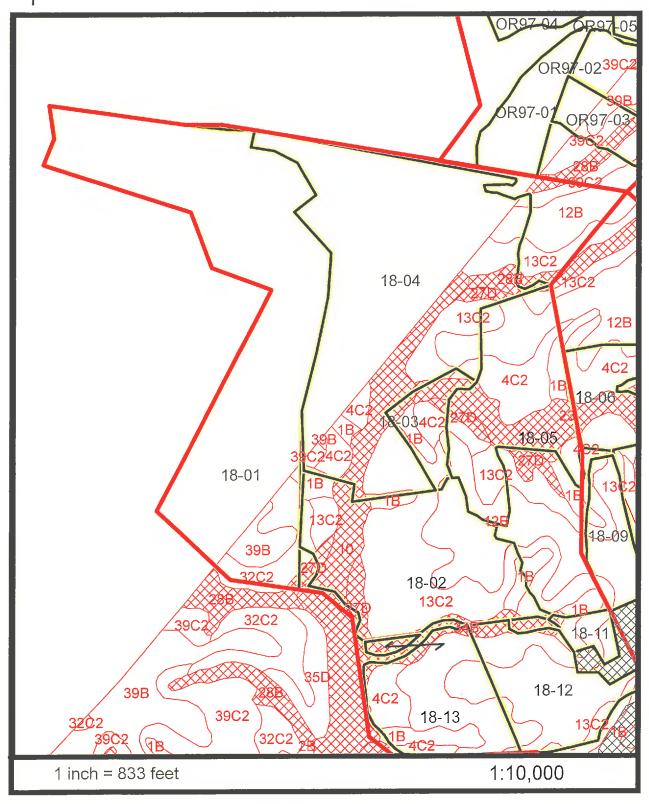
- 10' buffer

Field Boundary

Property Line - 100' buffer unless waiver issued

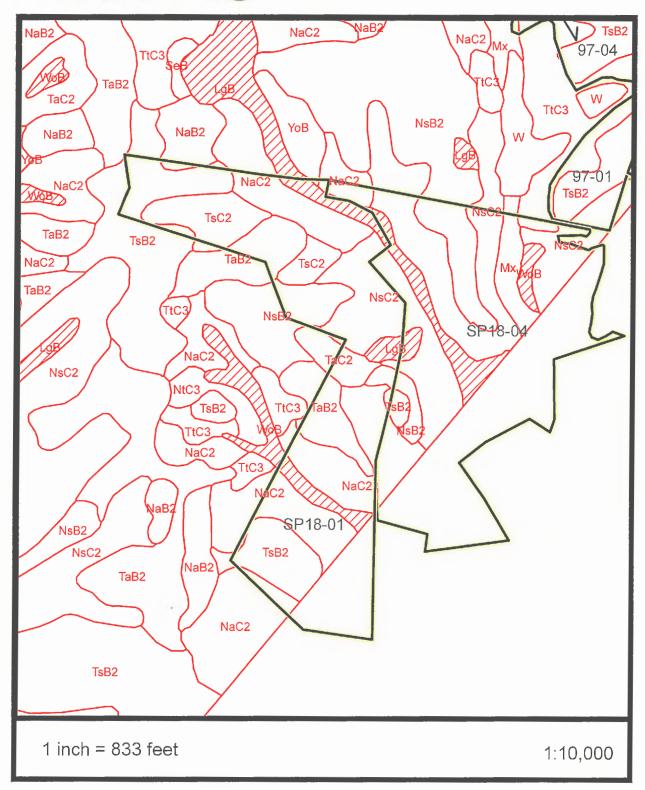


Glenburnie Farm SP 18 Fields 1-5



SOIL MAP





SOIL MAP

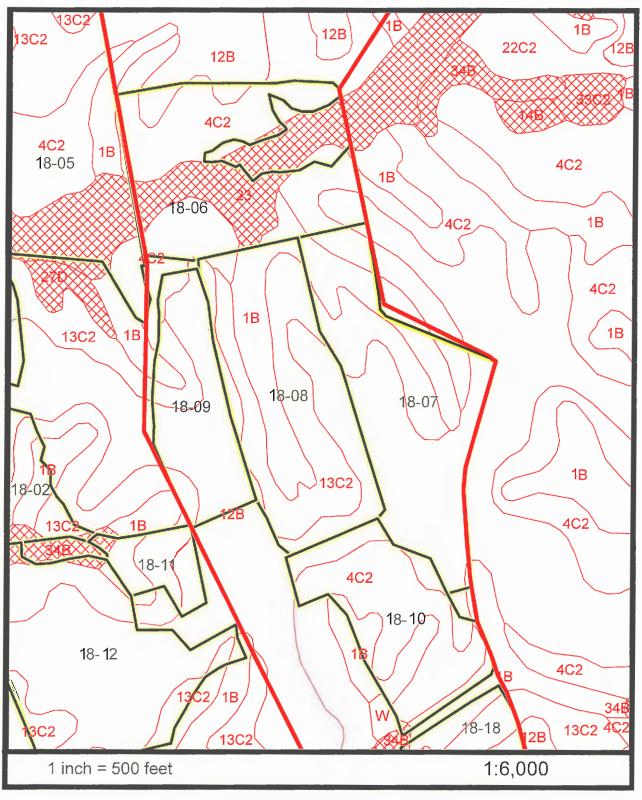








Glenburnie Farm SP 18 Fields 6-10

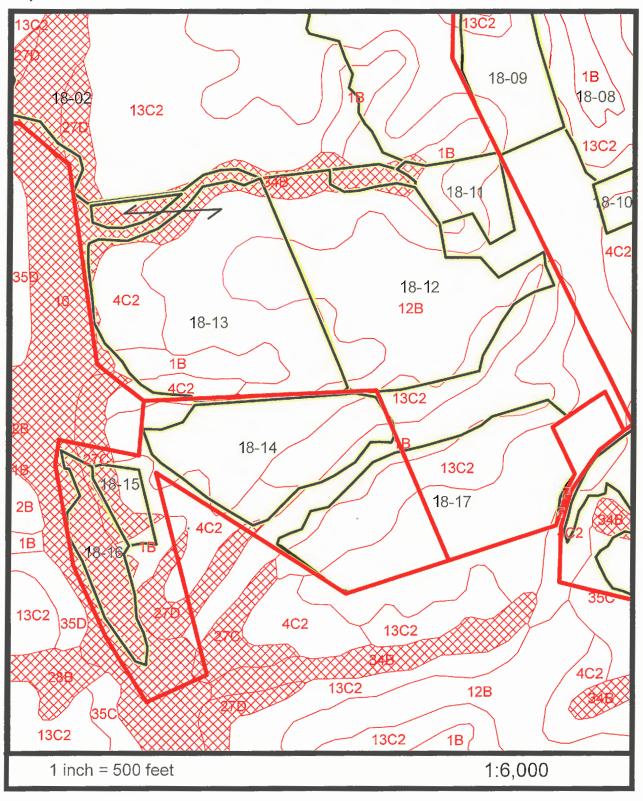


SOIL MAP





Glenburnie Farm SP 18 Fields 11-17

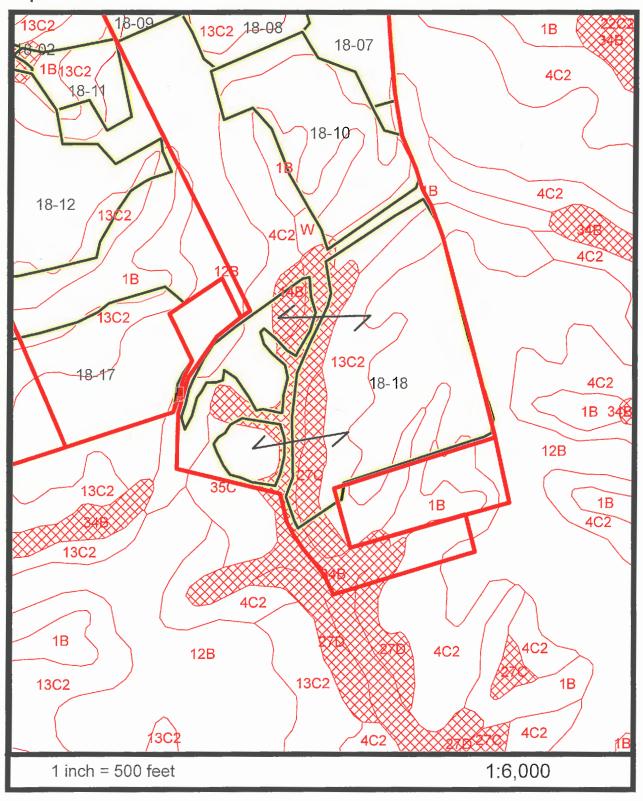


SOIL MAP





Glenburnie Farm SP 18 Fields 18



SOIL MAP

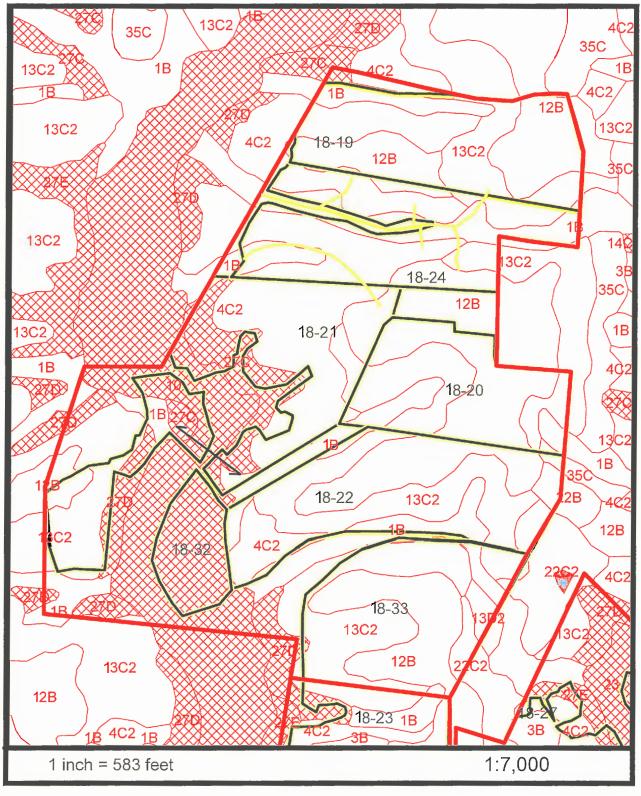
CREATED 12-4-2015



Environmentally Sensitive Areas



Glenburnie Farm SP 18 Fields 19-22, 24, 32, 33

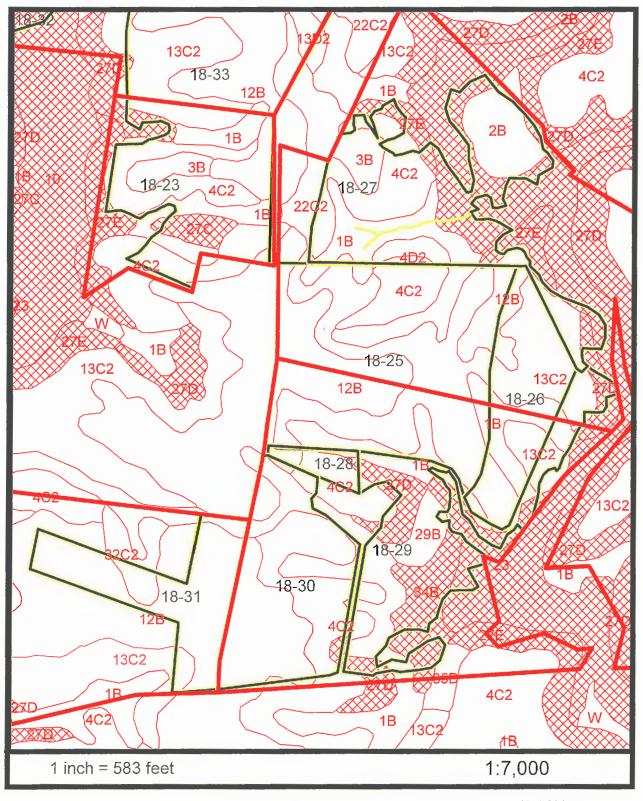


SOIL MAP





Glenburnie Farm SP 18 Fields 23, 25-31



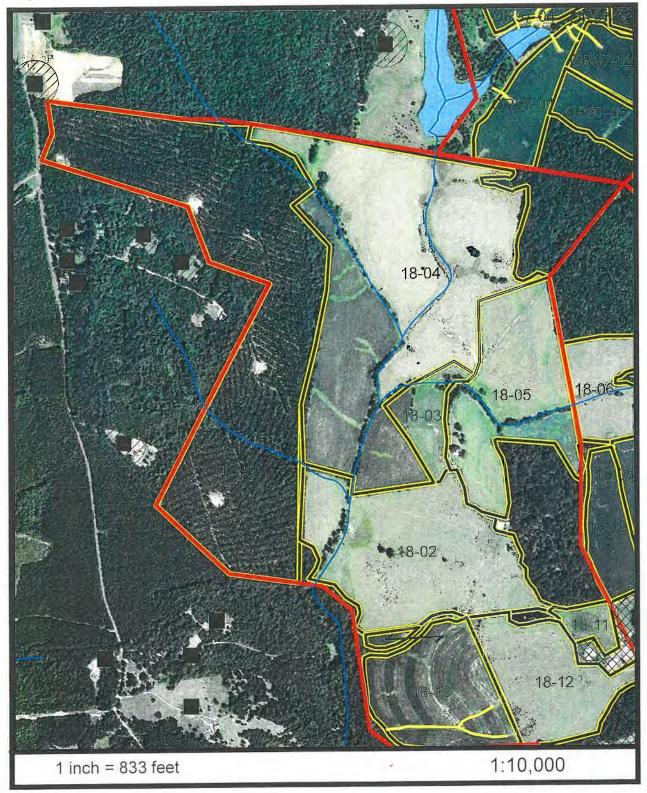
SOIL MAP







Glenburnie Farm SP 18 Fields 1-5

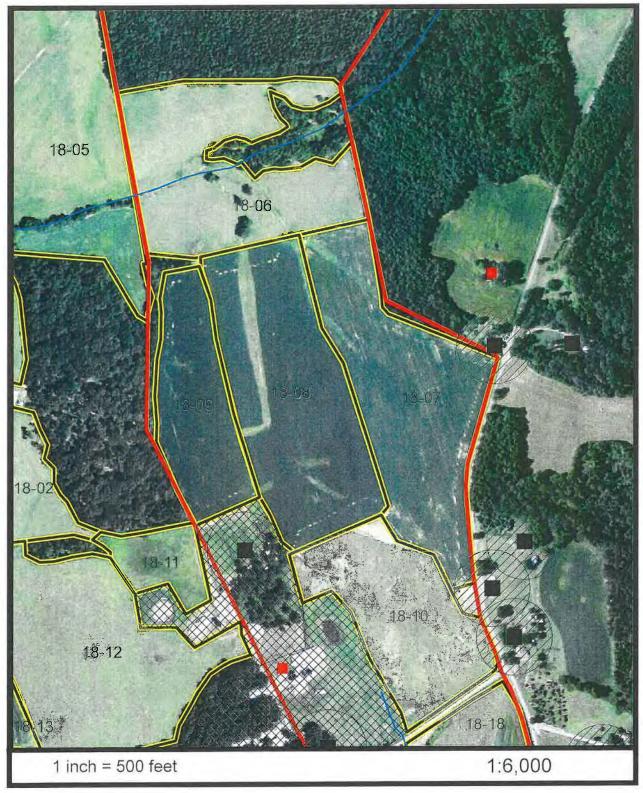


AERIAL MAP





Glenburnie Farm SP 18 Fields 6-10

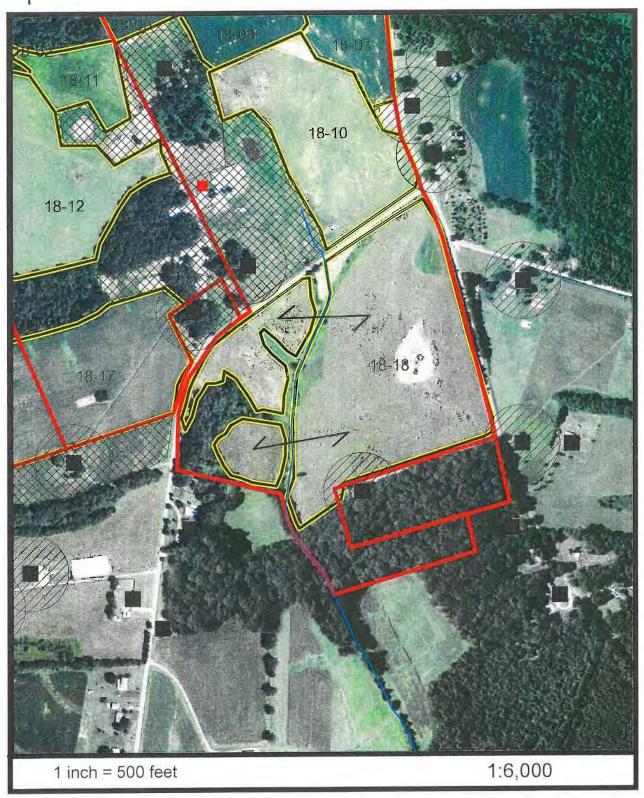


AERIAL MAP









AERIAL MAP



Glenburnie Farm SP 18 Fields 19-22, 24, 32, 33



AERIAL MAP

REVISED 8-16-16



Public Access SIte/Odor Sensitive Site Setback For Cut Your Own Christmas Tree Farms In effect November 15 to December 25 only



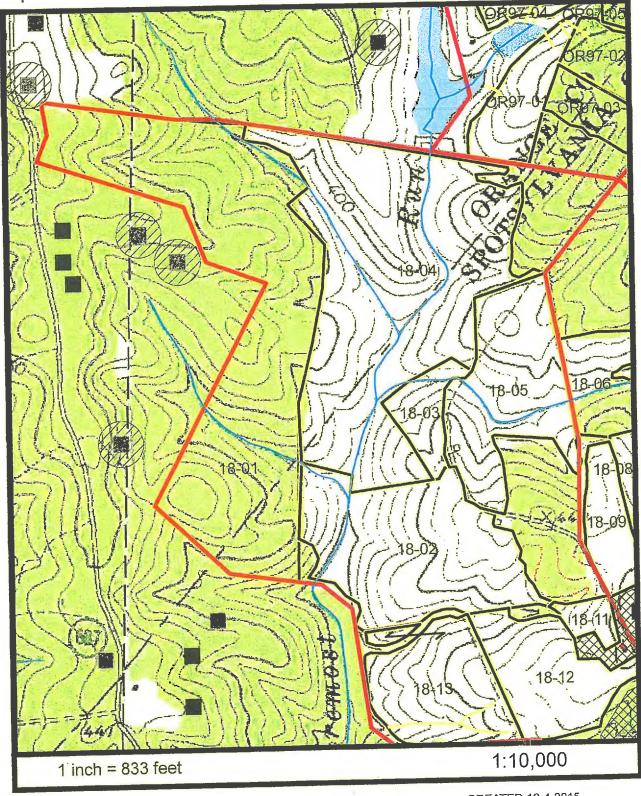
Glenburnie Farm SP 18 Fields 23, 25-31



AERIAL MAP



Glenburnie Farm SP 18 Fields 1-5

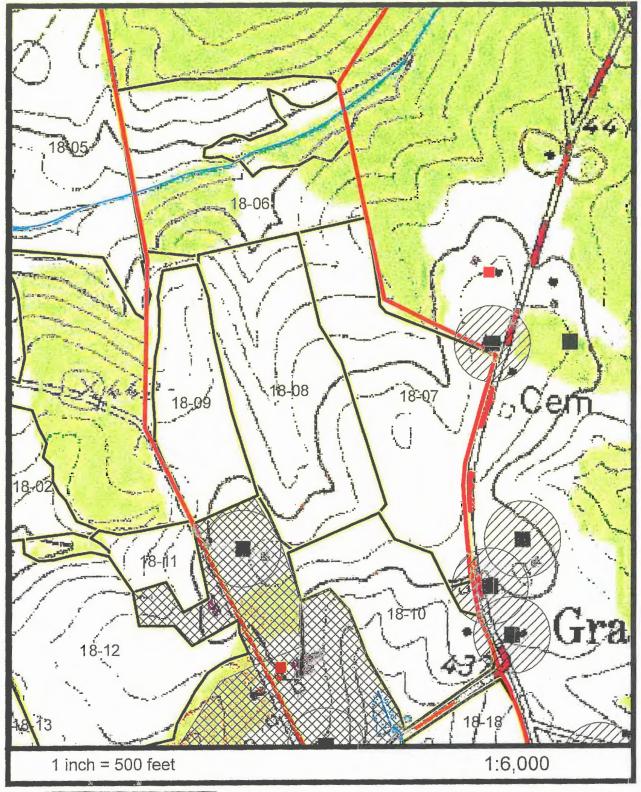


	AGRES
18-01	97.4
18-02	46.6
18-03	8.1
18-04	94.4
18-05	33.7

TOPO MAP



Glenburnie Farm SP 18 Fields 6-10

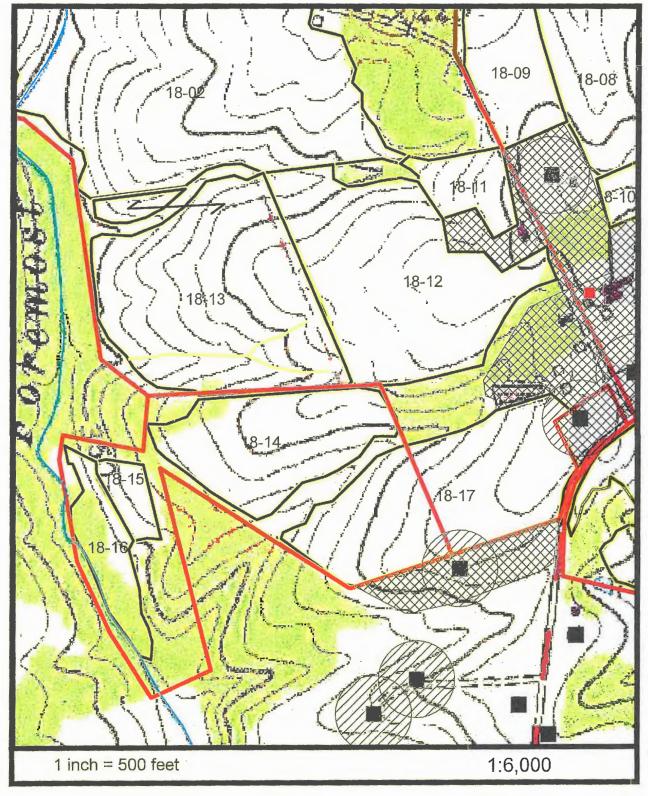


A FEED	ACRES
18-06	19.1
18-07	20.7
18-08	21.3
18-09	10.5
18-10	13.7

TOPO MAP



Glenburnie Farm SP 18 Fields 11-17



TOPO MAP

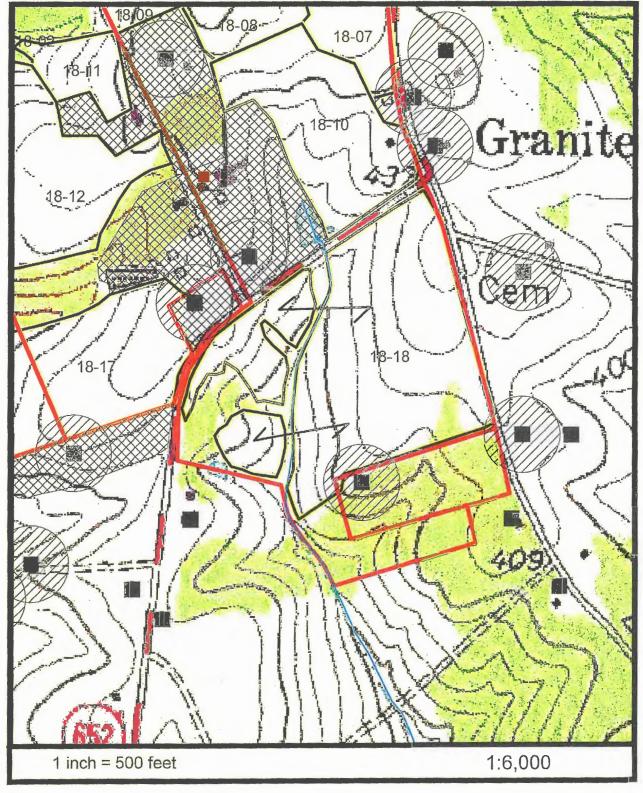
CREATED 12-4-2015

	ACRES
18-11	3.9
18-12	22.3
18-13	26.0
18-14	12.6

FIE D	ACRES
18-15	2.0
18-16	4.7
18-17	19.3



Glenburnie Farm SP 18 Field 18

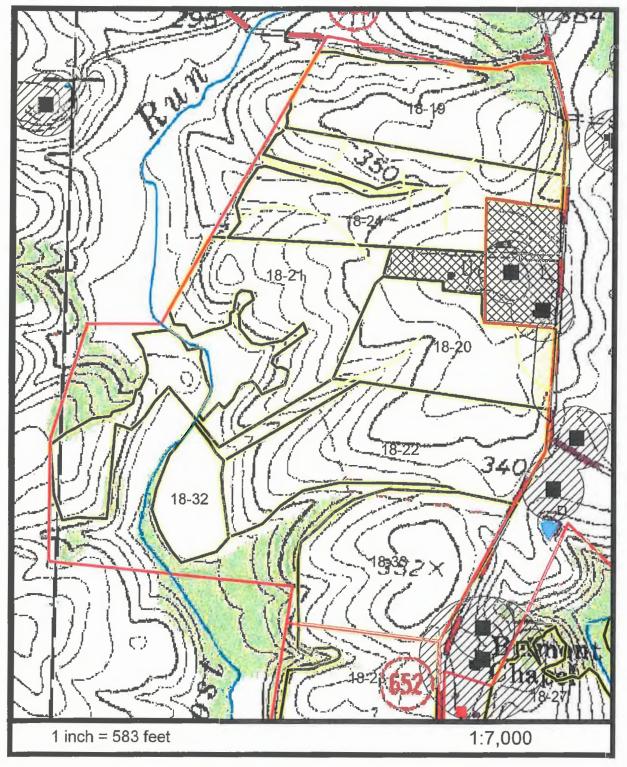


FIELD	ACRES
18-18	32.3

TOPO MAP



Glenburnie Farm SP 18 Fields 19-22, 24, 32, 33



AERIAL MAP

REVISED 8-16-16

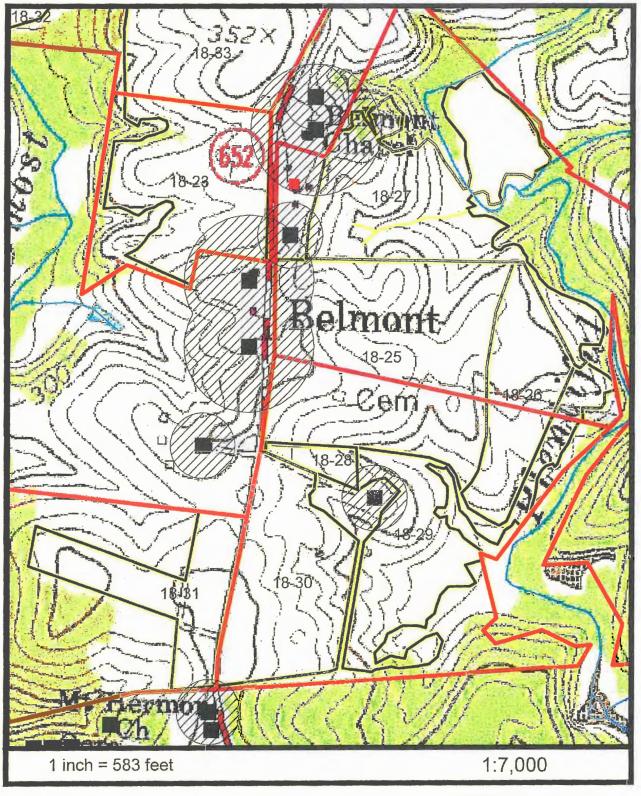
FIELD	ACRES	FIELD	ACRES
18-19	22.6	18-24	23.5
18-20	18	18-32	6.9
18-21	30.5	18-33	22.5
18-22	26.5		



Public Access SIte/Odor Sensitive Site Setback For Cut Your Own Christmas Tree Farms In effect November 15 to December 25 only



Glenburnie Farm SP 18 Fields 23, 25-31



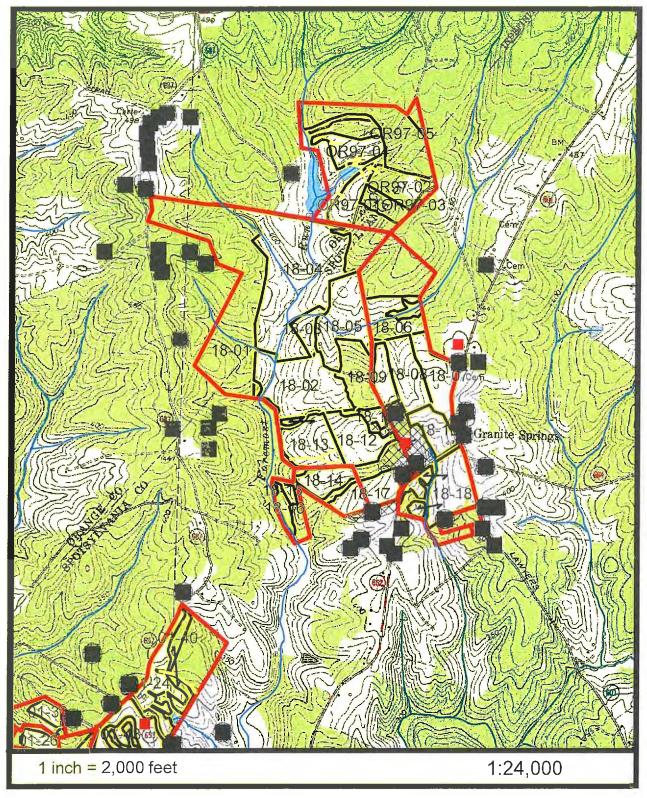
FJELD	Aeiles
18-23	19.2
18-25	36.9
18-26	12.8
18-27	26.5

AERIAL MAP

rien.	ACRES		
18-28	23.0		
18-29	19.7		
18-30	19.2		
18-31	12.5		



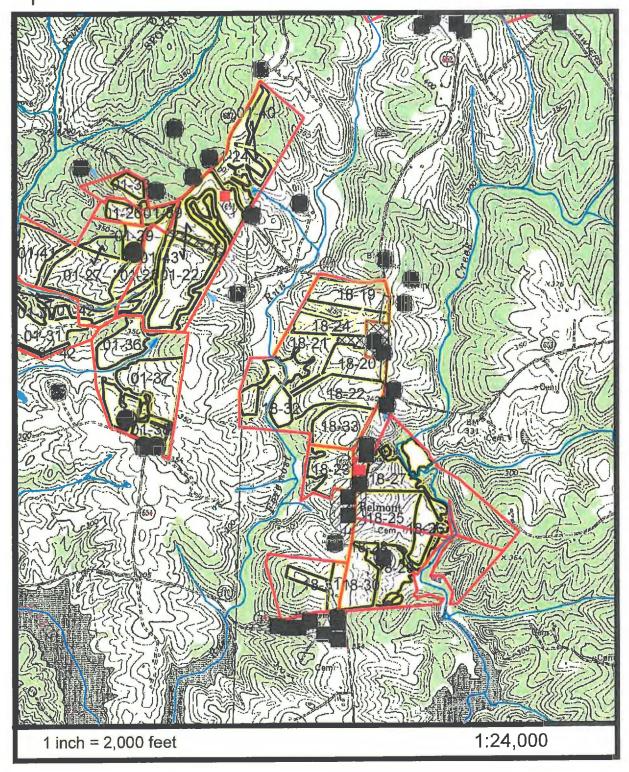
Glenburnie Farm SP 18 Fields 1-18



TOPO MAP



Glenburnie Farm SP 18 Fields 19-33



AERIAL MAP

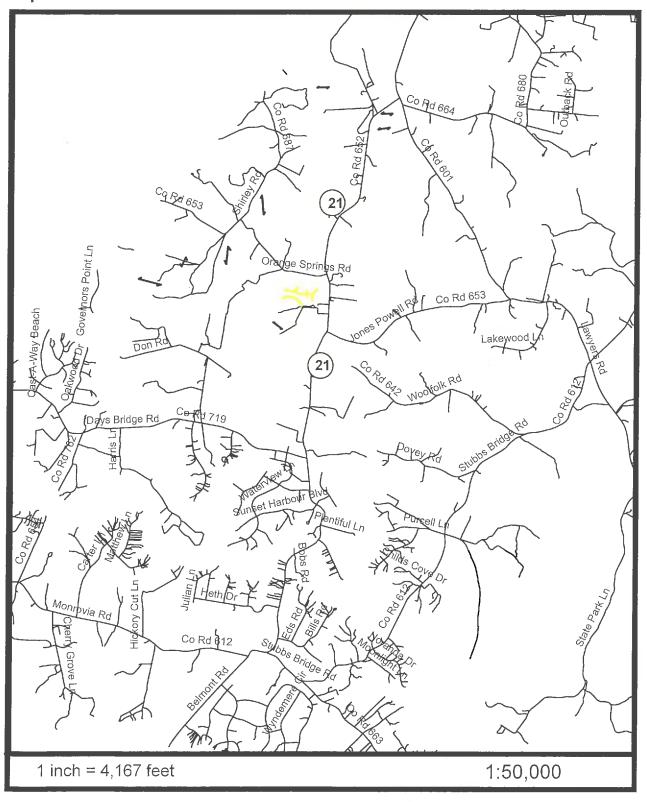
REVISED 8-16-16



Public Access SIte/Odor Sensitive Site Setback For Cut Your Own Christmas Tree Farms In effect November 15 to December 25 only



Glenburnie Farm SP 18 Fields 1-33



LOCATION MAP